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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/784,255 | 02/14/2001 | Stephen H. Gunther | 42390P4728X | 6135 |
| 8791 | 7590 | 01/23/2004 | EXAMINER | |
| BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD, SEVENTH FLOOR LOS ANGELES, CA 90025 | | | LAU, TUNG S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2863 | |

DATE MAILED: 01/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|----------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/784,255 | GUNTHER ET AL. | |
| | Examiner | Art Unit | |
| | Tung S Lau | 2863 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 31-63 is/are pending in the application.
- 4a) Of the above claim(s) 41-48 and 50-63 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-27, 31-36 and 49 is/are allowed.
- 6) ☒ Claim(s) 1, 6-9, 14, 16, 17, 22, 24, 37-40 is/are rejected.
- 7) ☒ Claim(s) 2-5, 10-13, 15, 18-21 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

Election/Restrictions

1. Claims 41-48, 50-63 stand withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention as noted in paper number 9.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claims 1, 6-9, 14, 16, 17, 22, 24, 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hussain et al. (U.S. Patent 6,172,611) in view of Gose et al. (U.S. Patent 5,675,297).

Hussain discloses a thermal management system, method and apparatus for an integrated circuit die including a temperature detection element formed directly on the integrated circuit die (col. 2, lines 40-60), the temperature detection element including at least one temperature sensor having an output (col. 4, lines 7-18); element to reduce power consumption of the integrated circuit die in response to the output of the at least one temperature sensor (col. 1, lines 10-

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56); a control element formed directly on the integrated circuit die (col. 4, lines 7-18), the control element including at least one register to provide an enable/disable bit for the thermal management system col. 5-6, lines 65-31); and a visibility element formed directly on the integrated circuit die, the visibility element to indicate a status of the output of the at least one temperature sensor (col. 5, lines 6-28); a die having a plurality of functional units formed thereon (col. 1-2, lines 57-9); internal clock circuitry formed on the die and coupled to at least one of the plurality of functional units (col. 2, lines 10-23); enable/disable bit for the thermal management system (col. 3, lines 48-67, col. 8, lines 5, lines 21), a microprocessor with memory coupled to a bus (col. 3, lines 48-67, col. 5, lines 28-40), using a trip point detection vs. time (fig. 4, 5 col. 7, lines 42-60), software control register to control the thermo unit (col. 2-3, lines 41-16), use of an external events to control thermo condition (col. 5, lines 6-28), slow down or throttle back the speed of the system (col. 4-5, lines 63-5), lowering supply power (col. 10-11, lines 54-2), software running condition with clock pulses (col. 2, lines 41-59), use of an interrupt signal (col. 5, lines 41-58).

Hussain does not disclose the use of pulse width modulation technique. Gose disclose the use of pulse width modulation technique (col. 2, lines 5-30), to provide a short circuitry protection, current limiting and reduce die size as a result of a conditional masking of the thermal shutdown protection circuitry (col. 2, lines 41-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hussain to have the use of pulse width modulation technique taught by Gose in order to provide a short circuitry protection, current limiting and reduce die size of the IC (col. 2, lines 41-47).

Claim Objections

3. Claims 2-5, 10-13, 15, 18-21, 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitation of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: prior art fail to teach a programmable voltage source providing a programmable voltage proportional to a temperature of the integrated circuit die; a comparator having one input coupled via a first signal line to the reference voltage source and another input coupled via a second signal line to the programmable voltage source, the comparator to provide a signal at the output of the at least one temperature sensor in response to the programmable voltage substantially equaling the reference voltage; A counter to count the lost clock cycles.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Allowable Subject Matter

4. Claims 25, 26, 27, 31, 32, 33, 49, 34-36 are allowed.

Reasons for Allowance

5. The following is an examiner's statement of reasons for allowance:

Independent claims 25, 34 contains allowable subject matter. None of the prior art of record shows or fairly suggests the claimed invention.

Regarding claim 25:

The primary reason for the allowance of claim 25 is the inclusion a method including a sensor exhibits the second state when pulled, repeating the acts of engaging the power reduction mechanism for the specific time interval and polling the sensor output after expiration of the specified time interval. It is these features found in the claim, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

Claims 26, 27, 31, 32, 33, 49 are allowed due to their dependency on claim 25.

Regarding claim 34:

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The primary reason for the allowance of claim 34 is the inclusion an apparatus with a register providing a sticky bit and counter to count a number of lost clock cycles. It is these features found in the claim, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes this claim allowable over the prior art.

Claims 35-36 are allowed due to their dependency on claim 34.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

6. Applicant's arguments filed 11/28/2003 have been fully considered but they are not persuasive.

A. Applicant argues that the examiner has not answer all the arguments filed Aug. 20, 2003. The examiner answer all the arguments filed by the applicant on Aug. 20, 2003 with the non final rejection on 11-10-2003.

B. In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily

combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. In *re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. In *re McLaughlin*, 170 USPQ 209 (CCPA 1971), references are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In *re Bozek*, 163 USPQ 595 (CCPA) 1969. In this case the prior art cited are from the same field of invention which are thermal control and sensing circuit.

C. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

D. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed

invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The arguments of counsel cannot take the place of evidence in the record. In *re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). Examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration include statements regarding unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, invention before the date of the reference, and allegations that the authors of the prior art derived the disclosed subject matter from the applicant.

During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In *re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This

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means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 703-305-3309.

The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 703-308-3126. The fax phone numbers for

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the organization where this application or proceeding is assigned are 703-308-5841 for regular communications and 703-308-5841 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TC2800 RightFAX Telephone Numbers : TC2800 Official Before-Final RightFAX - (703) 872-9318, TC2800 Official After-Final RightFAX - (703) 872-9319

TC2800 Customer Service RightFAX - (703) 872-9317

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A handwritten signature in black ink, appearing to read "J. Barlow", is located in the bottom right corner of the page.